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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,668	03/29/2004	Luc Vanmaele	27500-201	2420

7590 03/11/2005

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EXAMINER

BEISNER, WILLIAM H

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/811,668

Applicant(s)

VANMAELE ET AL.

Examiner

William H. Beisner

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9, 13, 15-38 and 59-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13, 15-38 and 59-63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/949,359.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/949,359, filed on 9/7/2001.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3, 4, 5, 7, 16, 17, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345).

The reference of Bisconte discloses a ribbon (web) of material which includes a plurality of microwells (20) for holding a plurality of samples to be analyzed by an automated device.

The instant claims differ by reciting that the plurality of microwells on the web material are formed by a bottom surface and an upstanding surface wherein the bottom surface and upstanding surface are of different hydrophilicity.

The reference of Turner et al. discloses that while it is known in the art to form a plurality of microwells using concave impressions (the wells of Bisconte), these webs or films are difficult because the films are easily torn or punctured (See column 2, lines 64-67). The reference of Turner et al. as a solution to this problem forms a plurality of microwells using a substrate of one material which is covered by a substrate of a second material. Any areas of the first material which are exposed provide sample-holding zones (See column 3, lines 37-54).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to form the sample holding wells of the primary reference using the coating method suggested by the reference of Turner et al. for the known and expected result of avoiding the difficulties associated with the method of forming wells as employed by the reference of Bisconte and discussed by the reference of Turner et al.

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With respect to the list of possible materials recited in claim 1, the reference of Turner et al. discloses that silicates (flexible glass) can be employed (See column 3, lines 62-63) and that a preferred material is polyimide (See column 6, lines 51-52).

With respect to the limitation of claim 3, the reference of Turner et al. discloses the use of plasma treatment to change or increase the hydrophilicity of a material (See Column 4, lines 63-64). As a result, it would have been obvious to one of ordinary skill in the art to employ plasma treatment on the sample holding substrate to improve hydrophilicity as suggested by the reference of Turner et al. and thereby improving the sample retention abilities of the sample substrate.

With respect to claims 4 and 5, while the reference of Bisconte discloses a ribbon with a plurality of wells, the reference is silent as to the number of wells and/or length to width ration of the ribbon. However, it would have been obvious to one of ordinary skill in the art to determine the optimum number of microwells to provide on the ribbon based merely on the desired number of samples to be analyzed while minimizing the number of time the roll must be replaced on the device. If the length-to-width ratio is not inherently greater than 20, again, based merely on the desired number of samples to be analyzed while minimizing the number of times the roll needs to be changed, it would have been obvious to one of ordinary skill in the art to provide a length of web material which minimizes the changing of the rolls while maintains the operating efficiency of the system.

With respect to claim 7, the reference Bisconte discloses the use of data storage tracks (2) on the ribbon device.

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With respect to claims 16, 17 and 21, the reference of Turner et al. discloses that the use of heat or laser ablation is known to form the desired pattern of wells (See column 4, lines 33-55). Also, the reference discloses that based merely on the properties of the sample to be held (the exposed sample holding surface can be hydrophilic or hydrophobic (See column 3, lines 37-54).

With respect to claim 19, the reference of Turner et al. discloses the use of masking as a method of providing hydrophobic layer on a hydrophilic layer (See column 4, lines 56-64).

6. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al. (US 5,958,345) and Brown et al. (WO 98/47003).

The combination of the references of Bisconte and Turner et al. has been discussed above.

The above claims differ by reciting the depth of the surface layer and the volume of the wells formed on the substrate.

The reference of Brown et al. discloses a substrate device with sample holding wells which is similar to that of the reference of Turner et al. The reference of Brown et al. discloses that the chambers (30) have a depth of about 0.05mm and volumes of 10 nanoliters can be achieved (See page 31, lines 20-24).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to determine the optimum depth and/or volume of the sample holding chambers based merely on the specifics of the test to be performed and the required amount of sample and/or reagents while maintaining the efficiency of the detection system.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345) and Odernheimer (US 5,216,925).

The combination of the references of Bisconte and Turner et al. has been discussed above.

The above claims differs by reciting that the web has barcodes.

The reference of Odernheimer discloses that the use of barcodes on a web of material is known in the art (See Figure 1(a), element 11).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to employ a barcode rather than a magnetic data storage for the known and expected result of providing an alternative means recognized in the art to achieve the same result.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345) and Ishizaka et al.(US 5,077,010).

The combination of the references of Bisconte and Turner et al. has been discussed above.

The above claim differs by reciting that the web includes an identifier at the beginning and/or the end of the web.

The reference of Ishizaka et al. discloses an analytical device which employs a web of test material and provides the web of material with a leader indicator (See Figure 48).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to provide the web material of the primary reference with a leader indicator for the known and

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expected result of providing the web with information which can be used by the automated system when the web is fed into the system.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345) and Naya (JP 11064213)

The combination of the references of Bisconte and Turner et al. has been discussed above.

The above claim differs by reciting that the non-exposed portions of the surface layer are removed.

The reference of Naya discloses a method of forming hydrophilic zones on a substrate which includes providing a hydrophobic cover layer which is exposed to light and the non-exposed portions are removed (See figure 3).

In view of this teaching, based merely on the materials of manufacture, it would have been obvious to one of ordinary skill in the art to determine the optimum manner among the plural method known in the art in which to manufacture the sample holding zones while providing the desired pattern of sample holding zones.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345) and Oelbrandt et al.(US 6,033,740) and Birch et al.(US 6,020,026)..

The combination of the references of Bisconte and Turner et al. has been discussed above.



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The above claim differs by reciting that the hydrophobic layer can be applied by non-impact printing.

The reference of Oelbrandt et al. discloses that it is known in the art to form a desired pattern of hydrophobic material on a printing substrate by using hydrophobic ink from an ink jet-printing device (See the abstract).

The reference of Birch et al. discloses that methods of forming printing plates can be applied to the microwell plate manufacturing art (See the abstract).

In view of these teachings, it would have been obvious to one of ordinary skill in the art to pattern the sample holding wells of the modified primary reference using the method disclosed by Oelbrandt et al. for the known and expected result of providing an alternative means recognized in the art to achieve the same result, forming a desired pattern of sample holding wells on a hydrophilic substrate.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345) and Richardson et al.(US 3,615,437) and Birch et al.(US 6,020,026)..

The combination of the references of Bisconte and Turner et al. has been discussed above.

The above claim differs by reciting that the substrate is a flexible metal oxide (aluminum oxide).

The reference of Richardson et al. discloses that aluminum oxide is a known hydrophilic material employed in the printing art (See column 2, lines 1-5).

The reference of Birch et al. discloses that methods of forming printing plates can be applied to the microwell plate manufacturing art (See the abstract).

In view of these teachings, it would have been obvious to one of ordinary skill in the art to employ aluminum oxide coated aluminum foil as the substrate material for the known and expected result of providing an alternative material known in the art for providing a hydrophilic surface upon which a hydrophobic layer may be patterned to form an area of hydrophobic and hydrophilic surfaces.

12. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345) and either of Chateau (US 4,071,315) or Kolehmainen et al.(US 4,349,510).

The combination of the references of Bisconte and Turner et al. has been discussed above.

While the reference of Bisconte involves the analysis of biological samples on a web material and discusses the use of the web material in combination with an automated system (See column 9, lines 19-55), the reference is silent as to the structure of the automated system.

The reference of Chateau discloses a testing system which includes an unwinding roll (2), an application zone (25,28,32,33), a screening zone (36); and a transport mechanism (16) for transporting a web material from the holder to the application and screening zones.

The reference of Kolehmainen et al. discloses a testing system which includes an unwinding roll (1), an application zone (7,8,9), a screening zone (12); and a transport mechanism (2,21) for transporting a web material from the holder to the application and screening zones.

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In view of the disclosure of Bisconte and the disclosure of either the reference of Chateau or Kolehmainen et al., it would have been obvious to one of ordinary skill in the art to employ the web material of the modified primary reference in either of the systems of the references of Chateau or Kolehmainen et al. for the known and expected result of providing an alternative means recognized in the art for moving a web material with a plurality of sample zones past a number of processing and/or analysis stations during use of the web material.

13. Claims 15, 27-29, 31, 34, 35, 38 and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345) and Goodwin, Jr. (US 5,210,021).

The combination of the references of Bisconte and Turner et al. has been discussed above.

The above claim differs by reciting that both surfaces of the film includes a hydrophobic layer.

The reference of Goodwin, Jr. discloses that it is known in the art to define sample-holding zones on two sides of a flexible substrate using a hydrophobic material (See elements 14a and 14b).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to provide a hydrophobic layer on both sides of a substrate for the known and expected result of providing a plurality of sample holding zones which are provided in communication with respect to the substrate material.

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With respect to the limitation of claim 27, the reference of Turner et al. discloses the use of plasma treatment to change or increase the hydrophilicity of a material (See Column 4, lines 63-64). As a result, it would have been obvious to one of ordinary skill in the art to employ plasma treatment on the sample holding substrate to improve hydrophilicity as suggested by the reference of Turner et al. and thereby improving the sample retention abilities of the sample substrate.

With respect to claims 28 and 29, while the reference of Bisconte discloses a ribbon with a plurality of wells, the reference is silent as to the number of wells and/or length to width ration of the ribbon. However, it would have been obvious to one of ordinary skill in the art to determine the optimum number of microwells to provide on the ribbon based merely on the desired number of samples to be analyzed while minimizing the number of time the roll must be replaced on the device. It the length-to-width ratio is not inherently greater than 20, again, based merely on the desired number of samples to be analyzed while minimizing the number of times the roll needs to be changed, it would have been obvious to one of ordinary skill in the art to provide a length of web material which minimizes the changing of the rolls while maintains the operating efficiency of the system.

With respect to claim 31, the reference Bisconte discloses the use of data storage tracks (2) on the ribbon device.

With respect to claims 34, 35 and 38, the reference of Turner et al. discloses that silicates (flexible glass) can be employed (See column 3, lines 62-63) and that a preferred material is polyimide (See column 6, lines 51-52).

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With respect to claims 59 and 61, the reference of Turner et al. discloses that the use of heat or laser ablation is known to form the desired pattern of wells (See column 4, lines 33-55). Also, the reference discloses that based merely on the properties of the sample to be held ( the exposed sample holding surface can be hydrophilic or hydrophobic (See column 3, lines 37-54).

With respect to claim 60, the reference of Turner et al. discloses the use of masking as a method of providing hydrophobic layer on a hydrophilic layer (See column 4, lines 56-64).

14. Claims 26 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345), Goodwin, Jr. (US 5,210,021) and Brown et al.(WO 98/47003).

The combination of the references of Bisconte, Turner et al. and Goodwin, Jr. has been discussed above.

The above claims differ by reciting the depth of the surface layer and the volume of the wells formed on the substrate.

The reference of Brown et al. discloses a substrate device with sample holding wells which is similar to that of the reference of Turner et al. The reference of Brown et al. discloses that the chambers (30) have a depth of about 0.05mm and volumes of 10 nanoliters can be achieved (See page 31, lines 20-24).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to determine the optimum depth and/or volume of the sample holding chambers based merely on the specifics of the test to be performed and the required amount of sample and/or reagents while maintaining the efficiency of the detection system.

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15. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345), Goodwin, Jr. (US 5,210,021) and Odernheimer (US 5,216,925).

The combination of the references of Bisconte, Turner et al. and Goodwin, Jr. has been discussed above.

The above claims differs by reciting that the web has barcodes.

The reference of Odernheimer discloses that the use of barcodes on a web of material is known in the art (See Figure 1(a), element 11).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to employ a barcode rather than a magnetic data storage for the known and expected result of providing an alternative means recognized in the art to achieve the same result.

16. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345), Goodwin, Jr. (US 5,210,021) and Ishizaka et al.(US 5,077,010).

The combination of the references of Bisconte, Turner et al. and Goodwin, Jr. has been discussed above.

The above claim differs by reciting that the web includes an identifier at the beginning and/or the end of the web.

The reference of Ishizaka et al. discloses an analytical device which employs a web of test material and provides the web of material with a leader indicator (See Figure 48).

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In view of this teaching, it would have been obvious to one of ordinary skill in the art to provide the web material of the primary reference with a leader indicator for the known and expected result of providing the web with information which can be used by the automated system when the web is fed into the system.

17. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345), Goodwin, Jr. (US 5,210,021), Richardson et al.(US 3,615,437) and Birch et al.(US 6,020,026)..

The combination of the references of Bisconte, Turner et al. and Goodwin, Jr. has been discussed above.

The above claim differs by reciting that the substrate is a flexible metal oxide (aluminum oxide).

The reference of Richardson et al. discloses that aluminum oxide is a known hydrophilic material employed in the printing art (See column 2, lines 1-5).

The reference of Birch et al. discloses that methods of forming printing plates can be applied to the microwell plate manufacturing art (See the abstract).

In view of these teachings, it would have been obvious to one of ordinary skill in the art to employ aluminum oxide coated aluminum foil as the substrate material for the known and expected result of providing an alternative material known in the art for providing a hydrophilic surface upon which a hydrophobic layer may be patterned to form an area of hydrophobic and hydrophilic surfaces.

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18. Claims 62 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bisconte (US 4,883,642) in view of Turner et al.(US 5,958,345), Goodwin, Jr. (US 5,210,021) and either of Chateau (US 4,071,315) or Kolehmainen et al.(US 4,349,510).

The combination of the references of Bisconte, Turner et al. and Goodwin, Jr. has been discussed above.

While the reference of Bisconte involves the analysis of biological samples on a web material and discusses the use of the web material in combination with an automated system (See column 9, lines 19-55), the reference is silent as to the structure of the automated system.

The reference of Chateau discloses a testing system which includes an unwinding roll (2), an application zone (25,28,32,33), a screening zone (36); and a transport mechanism (16) for transporting a web material from the holder to the application and screening zones.

The reference of Kolehmainen et al. discloses a testing system which includes an unwinding roll (1), an application zone (7,8,9), a screening zone (12); and a transport mechanism (2,21) for transporting a web material from the holder to the application and screening zones.

In view of the disclosure of Bisconte and the disclosure of either the reference of Chateau or Kolehmainen et al., it would have been obvious to one of ordinary skill in the art to employ the web material of the modified primary reference in either of the systems of the references of Chateau or Kolehmainen et al. for the known and expected result of providing an alternative means recognized in the art for moving a web material with a plurality of sample zones past a number of processing and/or analysis stations during use of the web material.

***Double Patenting***



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19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

20. Claims 1-9, 13, 16, 19, 21, 22 and 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-10, 14 and 16-20 of U.S. Patent No. 6,783,735 in view of Turner et al.(US 5,958,345).

Claims 1, 3-10, 14 and 16-20 of U.S. Patent No. 6,783,735 encompasses a web device that is substantially the same as that recited in claims 1-9, 13, 16, 19, 21, 22 and 23 of the instant application.

The instant claims differ by reciting a list of possible materials of construction of the web substrate.

With respect to the list of possible materials recited in claim 1, the reference of Turner et al. discloses that silicates (flexible glass) can be employed (See column 3, lines 62-63) and that a preferred material is polyimide (See column 6, lines 51-52).

In view of this teaching and in the absence of a showing of criticality and/or unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the web substrate of any of the materials suggested by the reference of

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Turner et al. for the known and expected result of employing an art recognized material to construct the web substrate encompassed by the patented claims.

***Response to Arguments***

21. Applicant's arguments filed 3/29/2004 have been fully considered but they are not persuasive.

With respect to the combination of the references of Bisconte and Turner, Applicants argue that the combination is improper because i) the reference of Bisconte discloses a non-hydrophobic polymeric ribbon and teaches away from the use of a hydrophobic polymer ribbon as a web; ii) the reference of Bisconte omits to define the terms "non-hydrophobic"; iii) the reference of Bisconte contains little information of the size of the microwells; iv) the reference of Turner only refers sample holders and one skilled in the art would not be likely to construe this as reading upon a web material; and v) the reference of Turner omits to define the terms "hydrophilic" and "hydrophobic".

In response to arguments i) and ii) above, the reference of Bisconte was relied upon as a prior art teaching that it is known in the art to form microwell devices from "ribbon"-type substrates. Had the reference disclosed all of the claim limitations of claim 1, the reference would have been applied in a rejection of the claims under 35 USC 102 rather than 103. Note one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to argument iii) above, instant claim 1 is silent as to the size of the microwells as well.

In response to argument iv) above, the reference of Turner clearly discloses forming the “sample holder” of thin film materials. As disclosed in the specification at column 3, lines 37-64, and shown in the figures, one of ordinary skill in the art would clearly construe the sample holder of thin films as meeting the instant claim language of a “web material”. Note the instant claim language is silent as to the thickness of the “web material”.

In response to argument v) above, the reference of Turner clearly discloses that the sample holder includes the use of hydrophobic and hydrophilic materials and/or surface treatments (See column 3, lines 37-64). It is not clear how the reference would not meet the instant claim language in the absence of specific definitions of these terms. One of ordinary skill in the art clearly recognizes what is intended by a hydrophilic or hydrophobic zone. Again, the instant claim language does not further define the terms “hydrophilic” and “hydrophobic”.

With respect to claims 4 and 5, Applicants argue that the reference of Bisconte is silent as to the total number of wells.

In response and as stated in the rejection of the claims previously, while the reference of Bisconte discloses a ribbon with a plurality of wells, the reference is silent as to the number of wells and/or length to width ration of the ribbon. However, it would have been obvious to one of ordinary skill in the art to determine the optimum number of microwells to provide on the ribbon based merely on the desired number of samples to be analyzed while minimizing the number of time the roll must be replaced on the device. It the length-to-width ratio is not inherently greater than 20, again, based merely on the desired number of samples to be analyzed while

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minimizing the number of times the roll needs to be changed, it would have been obvious to one of ordinary skill in the art to provide a length of web material which minimizes the changing of the rolls while maintains the operating efficiency of the system. Applicants remarks a silent as to why the Examiner's reasoning does not present a case of obviousness and/or why the number of wells would be a patentable distinction over the prior art of record suggesting the same device other than the specific number of wells.

With respect to claim 7, applicants' comments are silent as to the disclosure of the use of data storage tracks (2) on the ribbon device by the reference Bisconte. The data storage track (2) of Bisconte meets the instantly claimed "plurality of markers".

With respect to claim 11, Applicants argue that the references of Bisconte and Turner are silent with respect to the use of polyesters or polyimides.

In response, the reference of Tuner clearly discloses and/or suggests the use of polyimides as evidences at column 6, lines 51-52, which states "The film 6 of the preferred embodiment consists of pure polyimide".

With respect to claims 16, 17, 19 and 21, Applicants content that these claims define over the combination of the references of Bisconte and Turner for the same reasons as set forth with respect to claim 1.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 1 are met by the combination of the references of Bisconte and Turner.

With respect to claims 2 and 6, Applicants content that these claims define over the combination of the references of Bisconte, Turner and Brown for the same reasons as set forth with respect to claim 1.

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In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 1 are met by the combination of the references of Bisconte and Turner.

With respect to claim 8, Applicants content that this claim defines over the combination of the references of Bisconte, Turner and Odernheimer for the same reasons as set forth with respect to claim 1.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 1 are met by the combination of the references of Bisconte and Turner.

With respect to claim 9, Applicants content that this claim defines over the combination of the references of Bisconte, Turner and Ishizaka for the same reasons as set forth with respect to claim 1.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 1 are met by the combination of the references of Bisconte and Turner.

With respect to claim 18, Applicants content that this claim defines over the combination of the references of Bisconte, Turner and Naya for the same reasons as set forth with respect to claim 1.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 1 are met by the combination of the references of Bisconte and Turner.

With respect to claim 20, Applicants content that this claim defines over the combination of the references of Bisconte, Turner, Oelbrandt and Birch for the same reasons as set forth with respect to claim 1.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 1 are met by the combination of the references of Bisconte and Turner.

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With respect to claim 13, Applicants content that this claim defines over the combination of the references of Bisconte, Turner, Richardson and Birch for the same reasons as set forth with respect to claim 1.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 1 are met by the combination of the references of Bisconte and Turner.

With respect to claims 22 and 23, Applicants content that these claims define over the combination of the references of Bisconte, Turner and either Chateau or Kolehmainen for the same reasons as set forth with respect to claim 1.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 1 are met by the combination of the references of Bisconte and Turner.

With respect to claims 15, 27-29, 31, 34, 35, 38 and 59-61 and the combination of the references of Bisconte, Turner and Goodwin, Applicants argue that neither of the references of Bisconte or Turner disclose or suggest the possibility of microwells on both sides of the substrate. Applicants further state that the reference of Goodwin is drawn to a filter device.

In response, the Examiner did not rely upon the disclosures of Bisconte or Turner for providing wells on both sides of the substrate. The reference of Goodwin was relied upon for this teaching. Furthermore, the instant claim language does not preclude the use of a filter as part of the web substrate. The filter defining a hydrophilic material surrounded by hydrophobic zones. Note the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

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With respect to claims 26 and 30, Applicants content that these claims define over the combination of the references of Bisconte, Turner, Goodwin and Brown for the same reasons as set forth with respect to claim 15.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 15 are met by the combination of the references of Bisconte, Turner and Goodwin.

With respect to claim 8, Applicants content that this claim defines over the combination of the references of Bisconte, Turner, Goodwin and Odernheimer for the same reasons as set forth with respect to claim 15.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 15 are met by the combination of the references of Bisconte, Turner and Goodwin.

With respect to claim 9, Applicants content that this claim defines over the combination of the references of Bisconte, Turner, Goodwin and Ishizaka for the same reasons as set forth with respect to claim 15.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 15 are met by the combination of the references of Bisconte, Turner and Goodwin.

With respect to claim 18, Applicants content that this claim defines over the combination of the references of Bisconte, Turner, Goodwin and Naya for the same reasons as set forth with respect to claim 15.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 15 are met by the combination of the references of Bisconte, Turner and Goodwin.

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With respect to claim 20, Applicants content that this claim defines over the combination of the references of Bisconte, Turner, Goodwin, Oelbrandt and Birch for the same reasons as set forth with respect to claim 15.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 15 are met by the combination of the references of Bisconte, Turner and Goodwin.

With respect to claim 13, Applicants content that this claim defines over the combination of the references of Bisconte, Turner, Goodwin, Richardson and Birch for the same reasons as set forth with respect to claim 15.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 15 are met by the combination of the references of Bisconte, Turner and Goodwin.

With respect to claims 22 and 23, Applicants content that these claims define over the combination of the references of Bisconte, Turner, Goodwin and either Chateau or Kolehmainen for the same reasons as set forth with respect to claim 15.

In response, the Examiner is of the opinion for reasons set forth above that the limitations of claim 15 are met by the combination of the references of Bisconte, Turner and Goodwin.

For these reasons Applicants' arguments filed 3/29/2004 are not found to be persuasive and the claims remain rejected for the reasons of record.

### ***Conclusion***

22. This is a continuation of applicant's earlier Application No. 09/949,359. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the



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earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

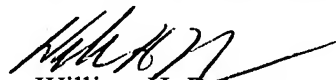
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Beisner whose telephone number is 571-272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:15am to 3:45pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Beisner  
Primary Examiner  
Art Unit 1744

WHB